

CLAIMS

1. Active matrix display device (6) comprising a display (2) with a plurality of display pixels (3), each having:

- 5 - a current driven emissive element (14);
- a data input (10) for receiving an analogue data signal;
- at least one drive element (T2) connected to a power supply and arranged to drive said current emissive element (14) in accordance with said data signal;
- 10 - selecting means (T1; T1,T3,T4) arranged to provide, in response to a select signal (18), said data signal to said at least one drive element (T2) to generate an overall brightness level during a frame period (F) in accordance with said data signal,

15 wherein said device (6) is adapted to divide said frame period (F) in at least a first sub-period (F1) during which said emissive element (14) carries a first non-zero current (I1) and a second sub-period (F2) during which said emissive element (14) carries a second non-zero current (I2), said at least first and second non-zero current substantially yielding said overall brightness level.

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25 2. Active matrix display device (6) according to claim 1, wherein said device (6) comprises a display controller (7) for generating said select signal (18), said select signal (18) comprising at least a first select signal (18') triggering said first sub-period (F1) and a second select signal (18'') triggering said second sub-period (F2).

3. Active matrix display device (6) according to claim 1, wherein said first sub-period (F1) and said second sub-period (F2) are of different duration.

4. Active matrix display device (6) according to claim 3, wherein said first sub-period (F1) has a shorter duration than said second sub-period (F2).

5 5. Active matrix display device (6) according to claim 1, wherein said first non-zero current exceeds said second non-zero current.

10 6. Active matrix display device (6) according to claim 1, wherein said device (6) comprises a display controller (7) adapted to generate at least said first current (I1) and said second current (I2) by varying a voltage (13;15) over said current driven emissive element (14).

7. Active matrix display device (6) according to claim 1, wherein said drive element (T2) is a thin film transistor having a short channel length.

15 8. Active matrix display device (6) according to claim 1, wherein said display pixels (3) are arranged in a matrix of rows (4) and columns (5), said device (6) comprising lines (13;15) for manipulating a voltage for said drive element (T2) for each row (4) or group of rows (4), and said device (6) 20 comprises a display controller (7) adapted to scan said lines (13;15) along said rows (4) or group of rows (4) across the display (2).

25 9. Active matrix display device (6) according to claim 1, wherein said device (6) is adapted to yield a brightness at said second non-zero current (I2) of 30% or less of the brightness at said first non-zero current (I1).

30 10. Active matrix display device (6) according to any one of the preceding claims, wherein said display (2) comprises a subset of display pixels (3) or emissive elements (14) and said device (6) is adapted to supply said first non-zero current (I1) and said second non-zero current (I2) to only said subset.

11. Active matrix display device (6) according to claim 10, wherein said display pixels (3) are coloured display pixels comprising red, green and blue emissive elements (14) and said subset is defined by colour.

5 12. Active matrix display device (6) according to claim 11, wherein said subset consists of said red and blue emissive elements (14).

13. Active matrix display device (6) according to claim 11, wherein said subset consists of said green emissive elements.

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14. Electronic device (1) comprising an active matrix display device (1) according to any one of the preceding claims.